TALKING BUILDINGS

Mobile Phone apps development
for research cooperation

TASK 1
recognize buildings

Goal

Identify that a user is near or inside a buidling and confirm or add the name of the building and address.

Functioning

When the app identifies the presence of wi-fis and when the GPS coordinates vary litle in value, it assumes it is near a building or inside of it.
A pop-up window asks to confirm if its the right location. If not, it asks to correct it. When the user confirms, we save the data to the server along with the gps coordinate. The server guesses and pre-fills the:
a) name
b) address of the building from a pre-built database of buildings near the GPS spot.

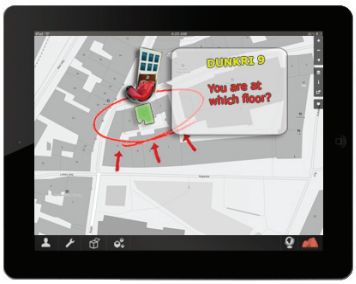
The actual pre-filled name and address is based on :
a) pre-scraped database of address/gps pairs
b) statistics on information entered by users.
We create an internal database of buildings based on a) and b).
In the server we match the name, address and gps to the database, also modifying the database.

TASK 2
wiki buildings

Goal

To add data to the building in a wiki-like manner, but more structured and user-friendly than wikipedia.

Functioning



The app knows you are inside of a building and is linked to a map. It will now search the available information about it and will ask the user to add its own info, on a step-by-step approach. Fields such as:
- Number of floors
- Floor where you are at
- Room number you are at
- approximate size area
- Function of the room
- What one is doing there
- Happyness levels

We tag information of the building wiki with these internal structure
fields.

Such fields can be skiped, or worked out in more detail. It automatically saves the info anonymously to the building for other future users.

Optionally: While these questions are answered the building starts to get extruded from the map and the internal structure of the building will be visually added in a simple 3D isometry.

TASK 3
user location in buildings

Goal

To use GPS and Wi-Fi triangulations with statistics of users to perfom a simple indoor location tracking.

Functioning

Auto-prefill data on fields, based on the location in the building, using each individual wifi protocol information.

On the other hand, when you store some information in the building, we always add wifi measurements.

With indoor location tracking all the other tasks will be more accurate. The fields can be pre-filled more swiftly.

TASK 4
navigation in complexity

Goal

To assume the information of a building from previous tasks is added and make its navigation user friendly

Functioning

Final part is how to show the information about the building and the concrete areas in the building based on your location: again, auto-prefilled fields based on GPS and wifi.

We assume the data input has been set in, and we resume to visualize it in a layer structure way, for easy navigatition.

This programming involves a higher graphical approach.

Pedro Aibéo : pedro@aibeo.com